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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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10/03/2002

The Goodyear Tire & Rubber Company
Patent & Trademark Department - D/823
1144 East Market Street
Akron, OH 44316-0001

EXAMINER

HU, HENRY S

| ART UNIT | PAPER NUMBER |
|----------|--------------|
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1713

DATE MAILED: 10/03/2002

3

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/782,562

Applicant(s)

MAGNET, SERGE

Examiner

Henry S. Hu

Art Unit

1713

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) 11-20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☒ Claim(s) 1-20 are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities:

On page 5, line 7, a typing error in 4,4'azobis(4-cyanovaleric acid), it should be changed to 4,4'-azobis(4-cyanovaleric acid).

On page 7, line 23, recitation "t-dodecyl" is confusing because dodecyl has many tertiary isomers. A defined structure is needed.

Appropriate correction is required.

Election/Restrictions

2. Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 1-10, drawn to a resin useful in making paraffinic solvent based paints, classified in class 524, subclass 80+.

Art Unit: 1713

II. Claims 11-20, drawn to a paint formulation using resin of Group I, classified in class 526, subclass 72+.

3. The inventions are distinct, each from the others because of the following reasons:

Inventions II and I are related as combination and subcombination. Inventions in this relationship are distinct if it can be shown that (1) the combination as claimed does not require the particulars of the subcombination as claimed for patentability, and (2) that the subcombination has utility by itself or in other combinations (MPEP § 806.05(c)). In the instant case, the combination as claimed does not require the particulars of the subcombination as claimed because the article can have other kind of additive or polymers, the two requirements are that the polymers are soluble in paraffin based solvent and the additives are compatible with the mixture. The subcombination has separate utility with different compositions such as adding different fillers or blending with other polymers.

4. Because these inventions are distinct for the reasons given above shown as different subject matters and the search required for each group is not required for other groups have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

5. During a telephone conversation with Alvin T. Rockhill on September 20, 2002 a provisional election was made with traverse to prosecute the invention of Group I, claims 1-10. Affirmation of this election for Group I, claims 1-10 must be made by applicant in replying to

Art Unit: 1713

this Office action. Claims 11-20 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

6. Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed (37 CFR 1.143).

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

8. Claims 1-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gindre et al. (US 5,496,905) in view of Aerts et al. (US 5,753,756).

The parent Claim 1 of the present invention relates to a resin useful in making paraffinic solvent based paints. The resin comprises monomers of: (A) 5-60 wt% of t-butyl cyclohexyl methacrylate, (B) 0-40 wt% of vinyl aromatic monomers, (C) 20-80 wt% of alkyl methacrylates, and (D) 1-30 wt% of alkyl acrylates. See other limitations on Claims 2-10.

9. Regarding the limitation of Claim 1, Gindre et al. disclose a resin particularly useful in making paraffinic solvent based paints. The resin comprises monomers of: (A) 15-55 wt% of **para-t-butyl styrene**, (B) 0-40 wt% of vinyl aromatic monomers, (C) 20-80 wt% of alkyl methacrylates, and (D) 2-25 wt% of alkyl acrylates. (Abstract, line 1-8; column 7, line 2-9)

The difference between Gindre et al. and instance parent Claim 1 is that Gindre et al. do not specifically disclose using t-butyl cyclohexyl methacrylate. Aerts et al. teach a coating composition in organic liquid carrier is useful as a finish for automobiles and trucks. Avers et al.

Art Unit: 1713

further disclose the film-forming binder comprises a hydroxy-functional methacrylate copolymer derived from comonomers comprising **t-butyl cyclohexyl methacrylate or para-t-butyl styrene** (abstract, line 1-6; column 5, line 12-40). The use of para-t-butyl styrene is interchangeable and equivalent to the use of t-butyl cyclohexyl methacrylate. Additionally, it should be noted the Aerts et al.'s two copolymers obtained from comonomer of t-butyl cyclohexyl methacrylate or para-t-butyl styrene have the same or similar degree of processibility in coating application as well as functional equivalence such as reactivities of copolymerization, since Avers et al. do not report such problem from interchanging these two comonomers in composition. Therefore, one having ordinary skill in the art would have found it obvious to replace para-t-butyl styrene with t-butyl cyclohexyl methacrylate in Gindre et al.'s resin composition as taught by Avers et al. Based upon their interchangeability and functional equivalence.

10. Regarding Claim 2, Gindre et al. Disclose alkyl methacrylate is isobutyl methacrylate (column 3, line 2). Regarding Claim 3, the most preferred alkyl acrylate is 2-ethyl hexyl acrylate (column 2, line 39-41). Regarding Claims 4-5, the vinyl aromatic monomers can be utilized include styrene (column 2, line 52-53) and para-methyl styrene (column 2, line 56). Regarding Claim 6, Gindre et al. disclose the most preferred alkyl acrylate is 2-ethyl hexyl acrylate (column 2, line 39-41) and also the wt% of vinyl aromatic monomer can be 0% (abstract, line 5).

With respect to the limitation of Claims 7-10, Gindre et al. disclose that the resin comprises monomers of: (A) 15-55 wt% of **para-t-butyl styrene**, (B) 0-40 wt% of vinyl

Art Unit: 1713

aromatic monomers, (C) 20-80 wt% of alkyl methacrylates, and (D) 2-25 wt% of alkyl acrylates. (Abstract, line 1-8; column 7, line 2-9). After interchanging para-t-butyl styrene with t-butyl cyclohexyl methacrylate, therefore, the wt% for each monomer is overlapping the claimed wt% limitation of Claims 7-10.

11. Claims 1-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yerielev et al. (US 5,034,154) in view of Aerts et al. (US 5,753,756).

Regarding the limitation of Claim 1, Yerielev et al. disclose an acrylic copolymer resin useful as components in high solids acrylic coatings suitable for electrostatic spraying. The monomers comprise (A) 5-40 wt% of hydroxy-substituted alkyl (meth)acrylates and (B) 5-95 wt% of non-hydroxy-substituted alkyl (meth)acrylates. It may include optional monomer such as styrene or alpha-methyl styrene (abstract, line 1-16; column 8, line 54-68) in 2-60 wt% (column 9, line 14-16). The polymerization solvent includes organic solvent such as nitrosubstituted paraffin, aromatic solvents and at least one aliphatic or cycloaliphatic internal olefin having 6-16 carbon atoms (column 3, line 50-58), furthermore, the polymerization solvent can remain in the resin for processing (abstract, line 10-14). It is noted that the above (meth)acrylates include esters of acrylic and methacrylic acid (column 7, line 53-56).

12. The difference between Yerielev et al. and instant parent Claim 1 is that Yerielev et al. do not specifically disclose using t-butyl cyclohexyl methacrylate as comonomer. Avers et al. teach a film-forming binder comprises a copolymer derived from hydroxy-functional methacrylate and

Art Unit: 1713

t-butyl cyclohexyl methacrylate (abstract, line 1-6; column 5, line 12-40). Aerts et al. further teach the advantage of such a coating composition in organic liquid carrier is useful for a finish for automobiles and trucks. Since both Aerts et al. and Yerielev et al.'s acrylic coating resin use the same hydroxy-functional methacrylate as comonomer, therefore, one having ordinary skill in the art would have found it obvious to add **t-butyl cyclohexyl methacrylate as comonomer** in preparation of Yerielev et al.'s acrylic coating resin as taught by Aerts et al., with expectation of obtaining a high solid coating composition useful for automobiles and trucks.

13. Regarding Claims 2 and 3, Yerielev et al. disclose non-hydroxy-substituted alkyl (meth)acrylates include esters of C₁-C₁₂ monohydric alcohols and acrylic or methacrylic acids (column 8, line 35-40), therefore, it includes isobutyl methacrylate.

Regarding Claims 4-6, the optional monomers disclosed by Yerielev et al. include monovinyl aromatic hydrocarbons containing 8 to 12 carbon atoms such as styrene (column 8, line 54-57), therefore, it also include para-methyl styrene.

Regarding Claims 7-10, through combining the compositions of Yerielev et al. and Aerts et al. by adding t-butyl cyclohexyl methacrylate as comonomer, thereby the wt% for each monomer is overlapping the limitation of Claims 7-10.

Conclusion

Art Unit: 1713

14. The prior art made of record and not relied upon is considered pertinent to applicants' disclosure. The following references relate to the preparation of paraffinic solvent based acrylic paints:

US Patent No. 4,870,145 to Chromecek.

US Patent No. 5,462,687 to Podszun et al.

US Patent No. 5,258,355 to Bloodworth et al.

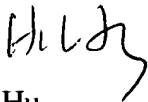
US Patent No. 5,124,226 to Yabuuchi et al.

US Patent No. 5,034,154 to Yezrieiev et al.

US Patent No. 4,985,517 to Yezrieiev et al.

US Patent No. 4,758,642 to Yezrieiev et al.

15. Any inquiry concerning this communication or earlier communication from the examiner should be directed to Henry S. Hu whose telephone number is (703) 305-4918. The examiner can be reached on Monday through Friday from 9:00 AM –5:00 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu, can be reached on (703) 308-2450. The fax number for the organization where this application or proceeding is assigned is (703) 746-9051. Any inquiry of general nature or relating to the status of this application or proceeding should be directed to the group receptionist whose telephone number is (703) 308-0661.



Henry S. Hu

September 30, 2002



DAVID W. WU
SUPERVISORY PATENT EXAMINER
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